## CLAIMS

-	1	\(\). A diversity receiving apparatus that separately
	2	weights reception signals of a plurality of reception
	3	systems using combining coefficients based on a
	4	respective amplitude component of each reception signal,
	5	combines the weighted reception signals, extracts symbol
	6	sections in the combined reception signals, and generates
	7	a clock for detecting symbols,
	8	the diversity receiving apparatus comprising:
	9	judging means for judging whether every combining
171 141	.0	coefficient is below a predetermined threshold;
±1  D	.1	multiplying means for uniformly multiplying every
F1	.2	combining coefficient when the judging means judges that
[]1	.3	every combining coefficient is below the predetermined
## 4 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	. 4	threshold; and
	.5	combining means for combining the reception
	. 6	signals using the multiplied combining coefficients.

- 2. The diversity receiving apparatus of Claim 1,
- wherein the combining coefficients are one of an
- 3 received signal strength for each reception system and a
- 4 parameter showing a reliability of the reception signal
- 5 obtained by each reception system.

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1 3. The diversity receiving apparatus of Claim 2,

- wherein the multiplying means multiplies every.

  combining coefficient by a constant when the judging

  means judges that every combining coefficient is below

  the predetermined threshold.
  - 4. The diversity receiving apparatus of Claim 3,
- wherein the constant is related to a result of
- 3 dividing a maximum value for the combining coefficients
- 4 by the threshold.

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- 5. The diversity receiving apparatus of Claim 4,
- wherein each combining coefficient is expressed using a predetermined number of bits,

the constant being  $2^n$  and the predetermined threshold being found by dividing a maximum value that can be expressed using the predetermined number of bits by  $2^n$ , where  $1 \le n <$  the predetermined number of bits.

- 1 & A diversity receiving apparatus that separately
- 2 weights reception signals of a plurality of reception
- 3 systems using combining coefficients based on a
- 4 respective amplitude component of each reception signal,
- 5 combines the weighted reception signals, extracts symbol
- 6 sections in the combined reception signals, and generates
- 7 a clock for detecting symbols,
- 8 the diversity receiving apparatus comprising:

judging means for judging whether every combining
coefficient is below a predetermined threshold;
multiplying means for uniformly multiplying every

multiplying means for uniformly multiplying every combining coefficient when the judging means judges that every combining coefficient is below the predetermined threshold;

combining means for combining the reception
signals using the multiplied combining coefficients; and
generating means for generating a clock that is

synchronized with the reception signals of the reception systems using the reception signals combined by the combining means.

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7. The diversity receiving apparatus of Claim 6,

wherein the combining coefficients are one of an received signal strength for each reception system and a parameter showing a reliability of the reception signal obtained by each reception system.

1 8. The diversity receiving apparatus of Claim 7,

2 wherein the multiplying means multiplies every

combining coefficient by a constant when the judging

4 means judges that every combining coefficient is below

5 the predetermined threshold.

9. The diversity receiving apparatus of Claim 8,

wherein the constant is related to a result of, - 2 dividing a maximum value for the combining coefficients 3 by the threshold. 4 10. The diversity receiving apparatus of Claim 9, 1 wherein each combining coefficient is expressed 2 3 using a predetermined number of bits, the constant being 2<sup>n</sup> and the predetermined 4 threshold being found by dividing a maximum value that 5 can be expressed using the predetermined number of bits by  $2^n$ , where  $1 \le n <$  the predetermined number of bits. A diversity receiving apparatus that separately weights reception signals of a plurality of reception systems using combining coefficients based on a  $(\Pi$ **4** respective amplitude component of each reception signal, Q combines the weighted reception signals, and generates a 5 clock for detecting symbols based on the combined 6 7. reception signals, the diversity receiving apparatus comprising: 8 9 judging means for judging whether every combining coefficient is below a predetermined threshold; 10 multiplying means for doubling every combining 11 coefficient when the judging means judges that every 12

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threshold:

combining coefficient is below the predetermined

control means for repeatedly activating the -15 judging means and multiplying means until the judging 16 17 means judges that at least one of the combining coefficients is no longer below the predetermined 18 19 threshold; combining means for combining the reception 20 signals using the multiplied combining coefficients when 21 the judging means judges that at least one of the 22 combining coefficients is no longer below the 23 24 predetermined threshold; and **亞**5 瓜 generating means for generating a clock that is synchronized with the reception signals of the plurality of reception systems using the reception signals combined by the combining means.

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12. The diversity receiving apparatus of Claim 11,

wherein the combining coefficients are one of an received signal strength for each reception system and a parameter showing a reliability of the reception signal obtained by each reception system.

1 13. A clock generating circuit for use by a diversity
2 receiving apparatus that separately weights reception
3 signals of a plurality of reception systems using
4 combining coefficients based on a respective amplitude
5 component of each reception signal and combines the

weighted reception signals, - 6 the clock generating circuit comprising: 7 judging means for judging whether every combining 8 coefficient is below a predetermined threshold; 9 multiplying means for multiplying every combining 10 coefficient when the judging means judges that every 11 12 combining coefficient is below the predetermined threshold: 13 combining means for combining the reception 14 15 signals using the multiplied combining coefficients; and generating means for generating a clock that is synchronized with the reception signals of the plurality of reception systems using the reception signals combined by the combining means.